

REMARKS:

Status Of Claims

Claims 1-45 are currently pending in the application with claims 1, 10, 15, 23, 31, and 37 being independent.

Office Action

In the Office Action, the Examiner rejected claims 1-5, 7, 8, 10, 12, 17-22, and 37-45 under 35 U.S.C. 103(a) as being unpatentable over Turetzky et al., U.S. Patent No. 6,529,829, in view of Hakala et al., U.S. Patent No. 6,452,544. The Examiner also rejected claim 6 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of Horvitz et al., U.S. Patent No. 6,601,012. The Examiner also rejected claims 9, 13-16, and 19-40 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala and DeLorme et al., U.S. Patent No. 6,321,158. The Examiner also rejected claim 11 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of Smith et al., U.S. Patent No. 6,374,179. Applicant respectfully submits that the currently pending claims distinguish the present invention from Turetzky, Hakala, Horvitz, DeLorme, Smith, and the other prior art references of record, taken alone or in combination with each other.

Rejections on obviousness grounds also cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977,

988, 78 U.S.P.Q.2d 1329 (Fed. Cir. 2006). The factual inquiry performed by the Examiner in issuing an obviousness rejection must be thorough and searching. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). The prohibition against conclusory examination is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decision-making, as it is in § 103. *In re Kahn*, 441 F.3d at 988.

"As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art". *KSR International Co. v. Teleflex Inc.*, Slip Opinion No. 04-1350 at 14; 550 U. S. ____ (2007) (Referring to *United States v. Adams*, 383 U. S. 39, 40 (1966)). Rather, there must be some "reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit". *Id.* (Citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")).

Consequently, an Examiner's mere identification in the prior art of each individual element claimed is insufficient to defeat the patentability of a claimed invention without proper reasoning to combine or modify the elements. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). In presenting some reasoning to combine prior art references, the Examiner may not resort to broad and conclusory statements; as such

statements are not "evidence" of anything. *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). The reasoning to make the claimed combination must be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d at 490.

Claim 1 recites "providing a first device including a triangulation positioning functionality", "providing a second device ... separate from the first device, the second device including a dead reckoning positioning functionality", and "resolving a position of one of the first and the second devices, wherein resolving the position includes using the dead reckoning positioning functionality and the triangulation positioning functionality". Claim 10 recites "providing a first mobile device including a triangulation positioning functionality" and "providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning functionality that includes an orientation component and a distance detection component".

As previously argued, Turetzky's dead reckoning system is integral to his GPS enabled device and the two are simply not physically separable. Therefore, Turetzky fails to teach two separate devices working together to resolve a position using both triangulation and dead reckoning. Hakala only teaches one GPS navigation device. Hakala is completely void of any suggestion of dead reckoning functionality at all. Therefore, neither Turetzky nor Hakala suggests two separate devices, one with triangulation functionality and one with dead reckoning functionality, as claimed in claim 1.

Furthermore, as previously argued, the prior art references made of record do not

supply nor support any reason to make the Examiner's proposed modification. The Examiner's asserted reasoning is "to provide a claimed method with using both a dead reckoning device, and a triangulation positioning device to get a location of those devices since a user can make a selection of obtained results". Page 5 of the April 5, 2007 Office Action. Such reasoning only supports Turetzky's integration of both devices; it does not speak to separate devices, as claimed.

In fact, Turetzky actually teaches a preference to combine multiple components on one integrated circuit. *See*, for example, column 4, lines 45-51; *See also* column 5, lines 31-48. Since Hakala only teaches a single navigation device, Hakala does not even teach enough to be pertinent to this prong of a *prima facie* case of obviousness. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "providing a first device including a triangulation positioning functionality" and "providing a second device to communicate with the first device, but separate from the first device, the second device including a dead reckoning positioning functionality", as claimed in claim 1, or "providing a first mobile device including a triangulation positioning functionality" and "providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning functionality that includes an orientation component and a distance detection component" as claimed in claim 10.

In response to the above arguments, the Examiner asserts that it "is not an inventive concept to put 2 devices together or separate", emphasis removed, and cites *In re Larson*,

In re Fridolph, and *In re Lockhart*. Pages 2-3, of the April 5, 2007 Office Action. However, those cases dealt with the opposite question, namely the patentability of integrating previously separate devices.

Furthermore, the Examiner's reliance on such case law is inappropriate where the limitation is critical. See MPEP §2144.04. That is the case here. There is a critical advantage to separating triangulation and dead reckoning functionality. Specifically, such an advancement allows the two to be used independently, when desired, but still cooperate to resolve a location, as claimed. For example, dead reckoning devices are typically sensitive to mounting issues, and may even need to be integrated into a vehicle's onboard systems. Therefore, dead reckoning devices often require professional permanent installation. On the other hand, triangulation devices, such as GPS devices, can be made hand held and portable, such that they can operate independently of the vehicle. Thus, precisely because the two devices are separable, greater flexibility, functionality, and utility can be achieved. This is a critical advantage of the claimed embodiment, and therefore makes the claimed limitation critical to the claimed embodiment. Where the criticality of a specific limitation has been shown, "it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection". MPEP § 2144.04. Thus, the cited case law does not support the Examiner's position and the Examiner's reliance thereon is inappropriate. As a result, the Examiner has failed to establish a *prima facie* case of obviousness and the present rejections cannot be sustained.

On page 4 of the May 25, 2007 Office Action, the Examiner defines "integral".

Applicant acknowledges that Turetzky's dead reckoning system is integral to his GPS enabled device. Applicant is not claiming that the first and second devices are integral with each other. Quite the opposite. Applicant is claiming the two devices being "separate" or "physically separate", which is precisely what the prior art fails to teach.

The Examiner also asserts that the issue is "not whether a feature of one references can be bodily incorporated in the other [to] produce the subject matter claimed". Page 4 of the May 25, 2007 Office Action. However, if the Examiner's proposed combination renders the prior art invention unsatisfactory for its intended purpose, or changes its principal of operation, there can be no reason to form the combination—and thus no *prima facie* case of obviousness. See MPEP § 2143.01; *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125 (Fed. Cir. 1984). Furthermore, "[a] prior art reference must be considered in its entirety, i.e., as a whole, **including portions that would lead away from the claimed invention**", emphasis added. MPEP § 2141.02; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Here, each prior art reference teaches integrating functionality into single unitary devices, rather than the claimed distribution of functionality. As the cited prior art explicitly teaches away from the claimed invention, there can be no reason to combine them in any manner that would render the present claims obvious.

Claim 5 recites "wherein providing the second device includes a rate gyro sensor". The Examiner acknowledges that neither "Turetzky nor Hakala teaches the portable device including a rate gyro". Page 5 of the April 5, 2007 Office Action. Rather, the Examiner

asserts that "Hakala teaches the integrated compass that performs the claimed functions".

Id. Applicant respectfully disagrees. A compass does not perform the same functions as the claimed rate gyro sensor. A compass provides an indication of orientation, but only when it is stable and not moving. Thus, a compass cannot provide any rate of turn information. A rate gyro provides an indication of rate of turn. As a result, a compass and a rate gyro perform vastly different functions, in vastly different ways, providing vastly different results. It simply cannot be said that they are equivalents. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "wherein providing the second device includes a rate gyro sensor", as claimed in claim 5.

Claim 11 recites "wherein the method further includes using one of the triangulation positioning and dead reckoning positioning functionalities to calibrate the other one of the triangulation positioning and dead reckoning positioning functionalities". Claim 33 recites "wherein the first and the second devices resolve the position using the GPS functionality while a GPS signal service is available to the first device, and wherein one of the first and the second devices resolve the position using the dead reckoning positioning functionality to supplement the GPS functionality when one of an interrupted, and unavailable GPS signal service is indicated by the first device". For example, dead reckoning positioning gradually loses accuracy, as small errors eventually build upon each other causing significant error in positioning. A series of GPS position fixes, corresponding to dead reckoning sensor inputs, may be used to determine an actual distance traveled, and therefore aid in calibration of the dead reckoning sensors. On the other hand, triangulation

positioning, such as GPS, may be intermittent in urban canyons. Thus, when a GPS fix is available, it may be used to update dead reckoning positioning, thereby calibrating the dead reckoning position.

The Examiner acknowledges that Turetzky does not disclose this limitation. See page 10 of the April 5, 2007 Office Action. In order to cure this defect, the Examiner asserted that Smith discloses such calibration. However, as previously argued, Smith's entire disclosure merely teaches forming a "composite of position data". See Abstract. More specifically, Smith's "[p]osition service module 202 is disposed to receive position data and aggregate position data from each of a plurality of navigational position sources 208". Column 5, lines 55-58. Smith's "[p]osition service module 202 also functions to identify erroneous position data from [the sources] and eliminate such erroneous position data from the composite position data 240". Column 5, lines 61-64. However, at no point does Smith actually teach or suggest **calibrating** any of his navigational position sources with data provided by any of his other sources. Rather, the most that can be said for Smith is that he teaches "discarding certain position data". Column 6, line 1. Such **discarding** is clearly not analogous to, nor suggestive of, **calibration**. Therefore, Smith fails to disclose or suggest calibration, as described and/or claimed. As a result, no combination of Turetzky, Hakala, and/or Smith discloses, suggests, or makes obvious "wherein the method further includes using one of the triangulation positioning and dead reckoning positioning functionalities to calibrate the other one of the triangulation positioning and dead reckoning positioning functionalities", as claimed in claim 11, much less the

limitations of claim 33.

In responding the above arguments, the Examiner asserts that Applicant is "admitting a task of checking and/or comparison has been made", emphasis removed, presumably with respect to Smith. Page 2 of the May 25, 2007 Office Action. While Applicant is unclear of any significance to such an admission, Applicant respectfully disagrees. "For example, [Smith goes on to teach] heading information from GPS unit 220 is significantly more accurate when the GPS unit is moving than when it is stationary. Therefore, if velocity of user node 108 drops to "0", then position service module 202 should defer to compass 224 heading position data, since heading position data from GPS unit 220 can be erroneous. Conversely, at higher speeds, heading position data from GPS unit 220 is significantly more accurate than heading position data from compass 224. Plurality of navigational position sources can also generate their own error information which can include, but is not limited to degree of confidence, resolution, accuracy, and the like". Column 6, lines 2-14. Smith merely teaches **discarding** suspect or erroneous data, such as GPS derived heading data when stationary, rather than using one source to **calibrate** another, as claimed. Thus, Applicant does not concede that Smith teaches any comparison, much less actual **calibration**. As the cited prior art fails to teach each claim limitation, the Examiner has failed to establish a *prima facie* case of obviousness.

Claim 12 recites "retrieving navigation related data from a memory of the second mobile device and displaying the navigation related data on an integral display of the first mobile device". Claim 12 depends from claim 10. Thus, claim 12 not only requires the

first and second device to be separable, but also requires that the second, dead reckoning device store navigation data and that the first, triangulation device display the navigation data. Thus, not only are GPS and dead reckoning functions separated, so too are the storage and display of navigation data.

Turetzky discloses no such functionality. Turetzky does not even suggest the possibility of storing navigation data in one device and displaying that data on another, separate device. Hakala, on the other hand, teaches displaying navigation data on a head mounted display, which has no triangulation functionality. As discussed above, Hakala is completely void of any suggestion of any dead reckoning functionality. Indeed, the Examiner can only assert that it would have been obvious, without providing any reasoning supporting that assertion. See Page 5 of the April 5, 2007 Office Action. However, such broad and conclusory statements are not "evidence" of anything. *In re Kotzab*, 217 F.3d at 1370. As a result, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "retrieving navigation related data from a memory of the second mobile device and displaying the navigation related data on an integral display of the first mobile device", as claimed in claim 12.

Claim 15 recites "tracking a location of a first device using a triangulation positioning functionality" and "using a second device to communicate with the first mobile device, that is physically separable therefrom, and that includes a distance determination component and an orientation component". Claim 16 further requires "wherein the method further includes operably coupling the first and the second devices to communicate with one

another in a single vehicle". Thus, as in claims 1 and 10, claim 15 requires two physically separable units, one with triangulation capability and another with dead reckoning capability. Claim 16 expands on this and explicitly requires the two devices to communicate with one another in a single vehicle. Claim 23 recites "a first mobile device including a dead reckoning positioning component" and "a second mobile device removably situated in the first mobile device including a triangulation positioning functionality in communication with the first mobile device".

In contrast, as discussed above with respect to claim 1, Turetzky does not disclose two physically separable units, able to communicate with each other, one having triangulation capability and another having dead reckoning capability. As also discussed above, Hakala simply fails to teach any dead reckoning functionality.

As previously argued, DeLorme discloses a GPS receiver used *interchangeably* with a dead reckoning system, rather than together as claimed. Specifically, DeLorme's PDA device 02,102 can accept *either* a GPS system 08 or a dead reckoning system, but not both. Therefore, DeLorme's GPS system simply cannot communicate with his dead reckoning system, as required by the claim limitations. In fact, DeLorme actually *teaches away* from using his GPS system and dead reckoning system together. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious these claim limitations.

Claim 17 recites "wherein the handheld, portable second device includes a cradle for the first device". Claim 17 depends from claim 15, and therefore claim 17 requires that

the dead reckoning device provide a cradle for the triangulation device. Claim 41 recites "wherein the first device is housed in a first housing and the second device is housed in a second housing separable from the first housing". Claim 42 recites "wherein the second device is removably situated in the first device". Claim 43 recites "wherein the first device is removably situated in the second device". Claim 44 recites "wherein the second device provides a cradle for the first device". Claim 45 recites "wherein the first device provides a cradle for the second device".

The Examiner fails to specifically address claim 17. The Examiner addresses claims 41-45 by merely asserting that the prior art teaches "that the above devices can be separated, and they may use cradles", emphasis removed. Page 5 of the April 5, 2007 Office Action. However, such broad and conclusory statements are not "evidence" of anything. *In re Kotzab*, 217 F.3d at 1370.

In fact, the Examiner admits, at least with regard to claim 1, that the prior art fails to teach the devices being separate. *See* pages 2-4 of the April 5, 2007 Office Action. For example, "Turetzky et al. do not expressly disclose that the second device communicating with the first device, said 2nd device is separate from the first device", emphasis removed. Page 4 of the April 5, 2007 Office Action.

In fact, none of the prior art references suggest any cradling, much less in the manner claimed. Rather, prior art cradles or mounts are typically simple pieces of metal and/or plastic who's sole function is to physically support a device. Moving positioning functionality to the cradle or mount is one of the novel features of the claimed embodiment

of the present invention. This feature is ***wholly absent*** from any of the prior art references made of record. As a result, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious these claim limitations.

Claims 20 and 38 each recite "wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data". Claims 21 and 39 each recite "resolving whether the first device is receiving triangulation positioning signals"; "resolving whether the second device is receiving triangulation positioning data"; and "resolving whether either of the first and the second devices are producing dead reckoning position data". Claim 37 recites "tracking a location of a first device using a triangulation positioning functionality", "using a second device that communicates with the first device and includes a cradle for the first device, a distance determination component, and an orientation component", and "using software operable on the first and the second devices for selecting between using the first and the second devices".

Neither Turetzky nor Hakala suggests any evaluation of whether a triangulation device is providing better data than a dead reckoning device, or visa versa. In fact, the Examiner fails to directly address these limitations at all. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data", as claimed in claims 20 and 38, much less the limitations of claims 21 and 39. Furthermore, as discussed above, the prior art fails to

teach the claimed first and second devices, and therefore likewise fails to render obvious "selecting between using the first and the second devices", as claimed in claim 37.

Claim 26 recites "wherein the first mobile device further includes a triangulation positioning functionality, and the second device further includes a dead reckoning positioning component". Since claim 26 depends from claim 23, claim 26 actually requires both devices to include both triangulation and dead reckoning functionality. Neither Turetzky, Hakala, nor DeLorme disclose two devices, communicating with each other that each include both triangulation and dead reckoning functionality. While Turetzky does teach one device with both GPS and dead reckoning capability, Turetzky fails to teach two such devices communicating and cooperating to resolve a location. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 26.

Claim 29 recites "wherein the second mobile device is removably, physically interfaced to the first mobile device". As discussed above, Turetzky's GPS receiver is integral with his dead reckoning sensor, and are therefore not "removably, physically interfaced" to each other. As also discussed above, Hakala teaches no dead reckoning device. Finally, as discussed above, DeLorme's GPS system is interchangeable with his dead reckoning system, and therefore they are not interfaced with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 29.

Claim 30 recites "wherein the first and second mobile devices are wirelessly

interfaced with one another". As discussed above, Turetzky's GPS receiver is integral with his dead reckoning sensor, and therefore not "wirelessly interfaced with one another". As also discussed above, Hakala teaches no dead reckoning device. Also as discussed above, DeLorme's GPS system is interchangeable with his dead reckoning system, and therefore they are not interfaced with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 30.

Claim 31 recites "a first device having a processor, a memory, and a transceiver ... including a positioning function", "a second device having a processor, a memory, and a transceiver to communicate with one another, the second device including a positioning functionality", "wherein the transceivers in the first and the second devices transmit navigation related data wirelessly between the first and the second devices", and "wherein the first and the second devices cooperate to resolve a position of the first and the second devices". As discussed at length above, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious two separate positioning devices that wirelessly communicate with one another and cooperate to resolve a position, as claimed in claim 31. Specifically, as discussed at length, DeLorme's two positioning devices are ***interchangeable***, and do not ***cooperate*** with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 31.

Claim 35 recites "a remote server having a processor, a memory, and a transceiver

to communicate with at least one of the first and the second devices". Claim 36 recites "wherein the remote server processor responds to a request from at least one of the first and the second devices by performing calculations on the navigation related data and transmitting results to at least one of the first and the second devices".

The Examiner fails to specifically address these limitations in any way. As a result, the Examiner has failed to properly establish a *prima facie* case of obviousness.

The remaining claims all depend directly or indirectly from independent claims 1, 10, 15, 23, 31, or 37, and are therefore also allowable.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

By: /David L. Terrell/
David L. Terrell, Reg. No. 50,576
Garmin International, Inc.
1200 East 151st Street
Olathe, KS 66062
(913) 397-8200
(913) 397-9079 (Fax)